

-continued

Val	Arg	Gly	Asp	Ile	Asp	Val	Cys	Ala	Tyr	Phe	Thr	Pro	Ser	Asn	Ser
	35						40					45			
Pro	Gly	Val	Ser	Glu	Ile	Arg	Phe	Ser	Trp	Asp	Arg	Lys	Thr	Ile	Gln
	50					55				60					
Cys	Tyr	Glu	Asn	Ile	Ile	Thr	Val	Pro	Asn	Ala	Asp	Lys	Trp	Asp	Ile
65				70					75					80	
Ile	Lys	Lys	Ala	Pro	Ile	Val	Asp	Asp	Phe	Ser	Lys	His	Asp	Glu	Arg
			85					90					95		
Met	Ser	Lys	Glu	Arg	Ser	Val	Asp	Asp	Ile	Ile	Val	Asp	Ala	Met	Ala
			100					105					110		
Asp	Ala	Asp	Pro	Lys	Asp	Ala	Glu	Thr	Thr	Met	Phe	Trp	Arg	Pro	Pro
	115					120						125			
Ile	Asp	Asp	Ser	Ser	Tyr	Val	Met	Ala	Ser	Arg	Gln	Leu	Asp	Tyr	Leu
130						135					140				
Ala	Lys	Asn	Val	Glu	Arg	Lys	Glu	Met	Asn	Leu	Gln	Arg	Thr	Leu	Gln
145					150				155					160	
Ala	Ala	Thr	Ala	Gly	Glu	Ile	Gly	Ile	Asn	Lys	Ile	Ala	Ala	Cys	Val
			165					170						175	
Ile	Glu	Ala	Asp	Ser	Arg	Glu	Asp	Ile	Tyr	Ile	Lys	Ser	Met		
	180							185					190		

What is claimed is:

1. A vector for enhanced expression of at least one first nucleic acid molecule in a cell having a particular phenotype, said vector modified to comprise the first nucleic acid molecule and at least one second nucleic acid molecule encoding a transcription factor and a translation factor, wherein there is substantially co-temporal expression of the first and second nucleic acid molecules with respect to the phenotype of the cell, whereby expression of the second nucleic acid molecule enhances expression of the first nucleic acid molecule by enhancing transcription or transcription and translation.

2. The vector of claim 1 wherein the first nucleic acid molecule is operably linked to a first promoter and the second nucleic acid molecule is operably linked to a second promoter, and the first and second promoters function substantially co-temporally.

3. The vector of claim 2 wherein the first and second nucleic acid molecules are at different loci within the vector.

4. The vector of claim 2 wherein the first and second nucleic acid molecules are at the same locus within the vector.

5. The vector of claim 1 wherein the first nucleic acid molecule and the second nucleic acid molecule are operably linked to the same promoter.

6. The vector of claim 1 wherein transcription factor is of poxvirus origin.

7. The vector of claim 6 wherein the transcription factor is from a vaccinia virus.

8. The vector of claim 7 wherein the transcription factor is from an open reading frame selected from the group consisting of H4L, D6, A7, G8R, A1L, A2L, H5R, and combinations thereof.

9. The vector of claim 1 wherein the vector has a particular phenotype and the time of expression is matched with the phenotype of the vector.

10. The vector of claim 1 wherein the translation factor effects inhibition of eIF-2 α phosphorylation or inhibition of PKR phosphorylation or otherwise sequesters dsRNA, decreasing the cellular dsRNA content which increases the effective concentration of dsRNA.

11. The vector of claim 10 wherein said at least one second molecule is selected from the group consisting of: a K3L open reading frame, an E3L open reading frame, a VAI RNA open reading frame, an EBER RNA open reading frame, a sigma 3 open reading frame, a TRBP open reading frame, and combinations thereof.

12. The vector of claim 1 wherein said first nucleic acid molecule encodes a molecule selected from the group consisting of an epitope of interest, a biological response modulator, a growth factor, a recognition sequence, and a fusion protein.

13. The vector of claim 1 which is a recombinant virus.

14. The vector of claim 13 which is a recombinant poxvirus.

15. The vector of claim 1 wherein the transcription factor is a viral transcription factor.

16. The vector of claim 1 wherein the translation factor is a viral translation factor.

17. The vector of claim 16 wherein the transcription factor is a viral transcription factor.

18. A vector which is vCP1452 or vCP1433.

19. A method for preparing a vector as claimed in claim 1 comprising modifying the vector to comprise the at least one second nucleic acid molecule, and optionally also modifying the vector to comprise the first nucleic acid molecule, so that there is substantially co-temporal expression of the first and second nucleic acid molecules with respect to the phenotype of the cell.

20. The method for claim 19 comprising operably linking the first nucleic acid molecule to a first promoter and the second nucleic acid molecule to a second promoter, wherein the first and second promoters are functional substantially co-temporally.

21. The method for claim 19 comprising operably linking the first and second nucleic acid molecules to a promoter.

22. An immunological, immunogenic or vaccine composition comprising the vector of claim 1 and a pharmaceutically acceptable carrier or diluent.

23. A method for generating an immunological or immunogenic response in a host comprising administering to the host the composition of claim 22.